# Thirteen Years of Nitrate and Pesticide Data Results from Idaho's Statewide Program

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The Statewide Ground Water Quality Monitoring Program went into full-scale operation in 1991. By the end of the 2003 field season, over 1900 monitoring sites (mostly wells and a few springs) had been sampled throughout Idaho. Each year, about 400 sites are sampled based on a rotation plan where most sites are now being sampled once every five years, and about 100 sites are sampled every year. The development of the Statewide Network has resulted in three Rounds of data collection so far: Round 1 – sites sampled in 1991-1994, Round 2 – sites sampled in 1995-1998, and Round 3 – sites sampled in 1999 – 2003.

Nitrate and pesticide sample results are summarized as follows:

1. 96 of the 1868 sites (5 percent) had at least one sample with nitrate over the MCL of 10 milligrams per Liter (mg/L); another 202 sites (11 percent) had nitrate in the 5 to 10 mg/L range.
2. Based on the maximum nitrate value at each site, the median was 1.3 mg/L and the mean was 2.9 mg/L. Concentrations ranged from less than the reporting limit of 0.05 mg/L to 110 mg/L.
3. Of the 1196 sites sampled in both the First and Third Rounds, 158 sites (13 percent) had nitrate increases greater than 1 mg/L, and 87 sites (7 percent) had nitrate decreases greater than 1 mg/L.
4. The Treasure Valley, Weiser area, and Twin Falls County had the greatest nitrate impacts to the ground water in the state.
5. 21 of the 100 Annual sites (21 percent) had increasing or decreasing trends that were significant at the 95 percent confidence level. Thirteen of the Annual sites had nitrate values over 1 mg/L; 8 of these had significant increases, and 5 had significant decreases at the 95 percent confidence level.
6. Pesticides are detected more frequently at sites with elevated levels of nitrate.

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